AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of rendering a three-dimensional model comprised of volumetric three-dimensional data, comprising:

obtaining a characteristic of the three-dimensional model;

determining a three-dimensional dither pattern based on the characteristic, the three-dimensional dither pattern comprising points in a volumetric region, the points being assigned values to make the dither pattern correspond to the characteristic; and

rendering a dithered version of the three-dimensional model using the three-dimensional dither pattern.

2. (Original) The method of claim 1, wherein determining comprises selecting a number of points to make up the three-dimensional dither pattern and a location of the points on the three-dimensional model.

3. (Original) The method of claim 1, wherein the characteristic is obtained for a region of the three-dimensional model, and the three-dimensional dither pattern is determined for the region.

4. (Original) The method of claim 3, wherein characteristics are obtained for different regions of the three-dimensional model, different three-dimensional dither patterns are determined for the different regions based on the characteristics for the different regions, and the three-dimensional model is rendered using the different three-dimensional dither patterns.

5. (Original) The method of claim 1, wherein the three-dimensional dither pattern comprises data specifying pixels to illuminate when rendering the three-dimensional model.

6. (Original) The method of claim 5, wherein the pixels define individual points in the three-dimensional dither pattern.

7. (Original) The method of claim 1, wherein the characteristic comprises a density of the three-dimensional model.

8. (Original) The method of claim 7, wherein the density is obtained for a three-dimensional region of the three-dimensional model by averaging densities of sub-regions within the three-dimensional region.

9. (Original) The method of claim 1, wherein the characteristic comprises one of a color of the three-dimensional model, a field strength in the three-dimensional model, a temperature in the three-dimensional model, and a pollution concentration in the three-dimensional model.

10. (Original) The method of claim 1, wherein determining the three-dimensional dither pattern comprises selecting the three-dimensional dither pattern from a number of three-dimensional dither patterns stored in memory.

11. (Currently Amended) An article comprising a machine-readable medium that stores executable instructions for rendering a three-dimensional model comprised of volumetric three-dimensional data, the instructions causing a machine to:

obtain a characteristic of the three-dimensional model;

determine a three-dimensional dither pattern based on the characteristic, the three-dimensional dither pattern comprising points in a volumetric region, the points being assigned values to make the dither pattern correspond to the characteristic; and

render a dithered version of the three-dimensional model using the three-dimensional dither pattern.

12. (Original) The article of claim 11, wherein determining comprises selecting a number of points to make up the three-dimensional dither pattern and a location of the points on the three-dimensional model.

13. (Original) The article of claim 11, wherein the characteristic is obtained for a region of the three-dimensional model, and the three-dimensional dither pattern is determined for the region.

14. (Original) The article of claim 13, wherein characteristics are obtained for different regions of the three-dimensional model, different three-dimensional dither patterns are determined for the different regions based on the characteristics for the different regions, and the three-dimensional model is rendered using the different three-dimensional dither patterns.

15. (Original) The article of claim 11, wherein the three-dimensional dither pattern comprises data specifying pixels to illuminate when rendering the three-dimensional model.

16. (Original) The article of claim 15, wherein the pixels define individual points in the three-dimensional dither pattern.

17. (Original) The article of claim 11, wherein the characteristic comprises a density of the three-dimensional model.

18. (Original) The article of claim 17, wherein the density is obtained for a three-dimensional region of the three-dimensional model by averaging densities of sub-regions within the three-dimensional region.

19. (Original) The article of claim 11, wherein the characteristic comprises one of a color of the three-dimensional model, a field strength in the three-dimensional model, a temperature in the three-dimensional model, and a pollution concentration in the three-dimensional model.

20. (Original) The article of claim 11, wherein determining the three-dimensional dither pattern comprises selecting the three-dimensional dither pattern from a number of three-dimensional dither patterns stored in memory.

21. (Currently Amended) An apparatus for rendering a three-dimensional model comprised of three-dimensional volumetric data, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

obtain a characteristic of the three-dimensional model;

determine a three-dimensional dither pattern based on the characteristic, the three-dimensional dither pattern comprising points in a volumetric region, the points being assigned values to make the dither pattern correspond to the characteristic; and

render a dithered version of the three-dimensional model using the three-dimensional dither pattern.

22. (Original) The apparatus of claim 21, wherein determining comprises selecting a number of points to make up the three-dimensional dither pattern and a location of the points on the three-dimensional model.

23. (Original) The apparatus of claim 21, wherein the characteristic is obtained for a region of the three-dimensional model, and the three-dimensional dither pattern is determined for the region.

24. (Original) The apparatus of claim 23, wherein characteristics are obtained for different regions of the three-dimensional model, different three-dimensional dither patterns are determined for the different regions based on the characteristics for the different regions, and the three-dimensional model is rendered using the different three-dimensional dither patterns.

25. (Original) The apparatus of claim 21, wherein the three-dimensional dither pattern comprises data specifying pixels to illuminate when rendering the three-dimensional model.

26. (Original) The apparatus of claim 25, wherein the pixels define individual points in the three-dimensional dither pattern.

27. (Original) The apparatus of claim 21, wherein the characteristic comprises a density of the three-dimensional model.

28. (Original) The apparatus of claim 27, wherein the density is obtained for a three-dimensional region of the three-dimensional model by averaging densities of sub-regions within the three-dimensional region.

29. (Original) The apparatus of claim 21, wherein the characteristic comprises one of a color of the three-dimensional model, a field strength in the three-dimensional model, a temperature in the three-dimensional model, and a pollution concentration in the three-dimensional model.

30. (Original) The apparatus of claim 21, wherein determining the three-dimensional dither pattern comprises selecting the three-dimensional dither pattern from a number of three-dimensional dither patterns stored in memory.